

12. (original) The method of claim 11, wherein said flow of gas or of liquid is a flow of a cooling gas or of a cooling liquid thereby reducing the temperature into the reactor.

13 to 20 (non-elected).

21. (new) The method of claim 1, wherein steps e) and f) are carried out simultaneously with step d) within said corona discharge reactor.

An amount of \$64.00 is included within the bankdraft submitted together with the Petition for an extension of time and the present Amendment in payment of the prescribed fee for the addition of this new claim 21.

#### **REMARKS**

##### **Election/Restrictions**

In response to the Examiner's requirement as set forth in paragraphs 1 to 4 on pages 2 and 3 of the outstanding Office Action, the undersigned patent agent hereby confirms the election made without traverse to prosecute the invention of group I, namely original claims 1 to 12. As a result, in the above mentioned amendments to the claims, claims 13 to 20 have been identified as being "non-elected". Of course, the Applicant nevertheless reserves his right to file a divisional application in order to resume examination of the non-elected claims.

##### **Claim Rejections under 35 USC § 112**

As requested by the Examiner in paragraphs 5 and 6 on pages 3 and 4 of the outstanding Office Action, the wording of claims 1, 2 and 10 (not 5) has been revised in order to remove therefrom the indefinite expressions quoted by the Examiner.

**Claim Rejections under 35 USC § 102 and § 103**

In order to better distinguish the present invention over the cited prior art and overcome the Examiner's rejections as set forth in paragraphs 7 to 12 on pages 4 to 7 of the outstanding Office Action, the subject matter of original claims 2 and 3 has been incorporated into original claim 1, and the fact that some of the steps may be carried out simultaneously in the same reactor to obtain better results, has been emphasized. In newly submitted claim 21 Support of this amendment new claim can be found in the preferred embodiment of the invention disclosed on page 12, lines 28 and subsequent of the description with reference to Figures 3 to 5 of the drawings.

Of course, original claims 4 to 12 have also been kept of record.

As the Examiner may note, the present invention as now recited in currently amended claim 1 is directed to a method for the oxidation of volatile organic compounds containing gaseous effluents, which method comprises six (6) very specific steps identified as steps (a) to (f).

In the method as now claimed, the gaseous effluents containing VOC and other odors pass through a condenser to remove most of the condensable humidity and gases. Then, they pass through a demister and air filter to remove solid particles that may be suspended within the effluents.

Then, the effluents enter a reactor which contains corona electrical discharges combined with catalytic surfaces which are preferably part of the inner corona electrode, so as to oxidize the volatile organic compounds contained in the gaseous effluents (see page 12, lines 17 to 26 of the specification).

The gaseous effluents are also subjected to UV radiation preferably through an outer UV transparent dielectric electrode so as to further oxidize of needs be and therefore fully eliminate any volatile organic compounds that would be present in the gaseous effluents (see page 12, lines 28 and subsequent of the specification).

As aforesaid, all of these steps are preferably carried out simultaneously in a same reactor (see page 13, lines 14 and subsequent of the description).

U.S. patent No. 4,954,320 to BIRMINGHAM et al discloses a plasma reactor filled with ceramic particles or wire meshes "sandwiched" between two metal electrodes which are opaque to UV light. No means are provided to prevent condensation of high boiling point material within the reactor and cause the same to be obstructed and fail eventually by shorting of the two electrodes.

No means are also provided to prevent solid particles contained in the gaseous effluents from being removed prior to entering the plasma reactor. Such, in practice, may cause might problems, especially with a plasma reactor filled up with ceramic particles or wire mesh as disclosed in this document.

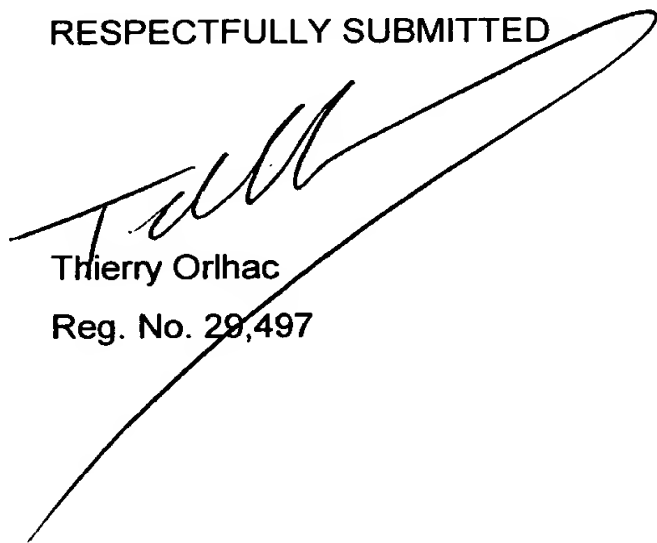
U.S. patent No. 3,970,567 to LOWTHER discloses an ozone generator having a corona chamber with dielectric solid absorbent particles disposed in the chamber for selective adsorption of ozone. In this generator, ozone is produced in a generating unit where only pure oxygen and silica is introduced to absorb ozone which is then used for a given application. This is different from the method according to the invention where no oxygen enriched gas is used. Only the contaminated gaseous effluents containing VOC are processed.

The reactor used in the method according to the invention is free flowing and devised so that several oxidizing processing may take place simultaneously without clogging the reactor, and at much cooler temperature than in BRIMINGHAM.

Thus, the present invention as now claimed patentably distinguishes over the cited prior art in that it is specifically directed to the combined uses of ozone, electrical discharges which generate other oxidants, catalytic reaction (preferably with catalyst of the platinum group) and treatment with UV radiation to achieve a very high level of oxidation in much cooler and free flowing environment than disclosed in any of the prior art references made of record.

For the above mentioned reasons, it is believed that the present invention as now claimed patentably distinguish over the cited prior art references, even when taken in combination.

RESPECTFULLY SUBMITTED



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